

Abstract

The present invention provides a technique for rapidly removing frost accumulated in air-refrigerant cooling apparatuses. An air-refrigerant cooling apparatus in accordance with the present invention includes a bypass line for directly supplying a defroster with refrigerant air having an increased temperature from a compressor, avoiding temperature drop by a heat exchanger and an expansion turbine. Moisture of the frost melted in the defroster is externally exhausted by a fan.